

XII.—List of Mammalia collected by the late Dr. STOLICZKA when attached to the embassy under SIR D. FORSYTH in Kashmir, Ladák, Eastern Turkestan, and Wakhán, with descriptions of new Species.—By W. T. BLANFORD, F. R. S., F. Z. S.

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The collections made by Dr. Stoliczka in Kashmir, Ladák, Káshghar, and Wakhán comprise a very fine series of mammalia, the description of which has been entrusted to me by Mr. Hume, who has undertaken the general direction, besides a large share in the details, of a work intended to be a memorial of our late friend. It is of course impossible to supply the place of the naturalist whose collections I shall do my best to describe, for with him has perished much knowledge of the habits and distribution of the animals, and although this want can be partially atoned for by the copious notes he has left behind, much unfortunately can never be replaced. In the present paper I shall merely give a list of the species of mammalia represented in the collections, with short characters of those which appear to be new, reserving all detailed descriptions for the larger work, in which it is intended to illustrate all the novelties and imperfectly known forms as fully as possible.

There is always more difficulty in procuring specimens of mammalia than in collecting terrestrial animals belonging to most of the other classes of vertebrata and invertebrata, and this is especially the case with the larger forms. It is consequently not to be expected that the species represented will be more than a portion of those inhabiting the country. Still the collection is rich in some respects, and especially in kinds of rodents, and it adds largely to our knowledge of the fauna of Western Tibet and Eastern Turkestan. The larger mammals indeed were originally better represented, but after Dr. Stoliczka's death many specimens appear to have been removed from the collection. Such at least was the case with the ruminants. In a private letter which Dr. Stoliczka wrote to me, he told me he had sent 22 skins of wild sheep from Káshghar. Of these only 11, 7 males and 4 females, are now forthcoming, and not one of these has fine horns. There is not a single specimen of *Ovis Poli* from the Pámir, the original locality, although I have reason to believe that Dr. Stoliczka brought away one head at least. Lastly, there are skeletons of wild sheep and ibex in the collection, of which the heads have disappeared. It is highly probable that other specimens besides those of *Ovis Poli* have been similarly made over to private individuals. The value of the collection for scientific purposes has been seriously diminished by its being broken up, and the finest specimens distributed, before it had been examined.

For convenience the country traversed may be divided into the Kashmir valley, Ladák, the Kuenlun range south of Yárkand (Karakásh valley, Sanjú Pass, &c.), the plains of Eastern Turkestan around Yárkand and Káshghar, the ranges north of Káshghar, being spurs from the Thian-shan range, the Pámir, and Wakhán.

The examination of the bats collected has been undertaken by Mr. Dobson, who will describe them separately.

INSECTIVORA.

1. ERINACEUS ALBULUS.—Plains of Eastern Turkestan.

2. SOREX (CROCIDURA) MYOIDES, sp. nov.

S. parvus, murinus, subtus albescens, pedibus albidis, pilis brevibus sparsis indutis, caudá supra fuscá, subtus albescente, setis brevissimis confertim annulatá, pilisque longiusculis hic inde instructá, auribus mediocribus, rostro subtus albedo. Long. corporis eum capite 2.1, caudæ 1.5, pedis posterioris cum tarso 0.5, auris 0.22 poll. angl.

Hab.—Leh, Ladák.

CARNIVORA.

3. FELIS LYNX.—Skins purchased at Káshghar.

4. *F. sp. near F. pardinus (? Chaus caudatus, Gray).*—Skin purchased as Káshghar.

5. *F. UNCIA.*—Ladák; Pámir?

6. CANIS LUPUS.—Skins purchased at Káshghar.

7.* *C. sp. nov. near C. aureus but larger.*—Skin purchased at Káshghar.

8. *C. (VULPES) MONTANUS.*—Ladák (purchased); plains of Yárkand.

9.* *C. (VULPES), sp. immature.*—Skin purchased at Káshghar.

10.* *MELES, sp. nov.*—Skin purchased at Káshghar.

11. *MARTES FOINA ?*—Skin purchased at Yárkand.

12. *M. sp. (? M. ABLETUM, var.).*—Skin purchased at Leh.

13. *MUSTELA VULGARIS ? var.*—Purchased at Yárkand.

RODENTIA.

14. PTEROMYS INORNATUS.—Kashmir.

15. ARCTOMYS AUREUS, sp. nov.

A. aureo-fulvus, dorso nigro lavato, capite antice fulvescenti-cano, maculo fusco ad rostri extremitatem signato, ventre interdum leviter ferru-

* These species are probably new but it is not thought advisable to propose names on the evidence of imperfect skins.

ginescente, caudā tertiam partem corporis capitisque æquante, fulvā, nigro breviter terminatā; pilis elongatis corporis omnibus ad basin fuscis. Long. a rostro ad basin caudæ circiter 18 (in corio dessiccato), caudæ vertebrarum 6, palmæ 2, plantæ fere 3, cranii 3·7 poll.

Hab.—Kaskasu pass between Yárkand and Sarikol, east of the Pámir.

This is a much smaller species than *A. caudatus*, which it resembles somewhat in colour, but it is never apparently so ferruginous beneath, nor so black above as are some specimens of the Kashmir marmot. The tail in *A. aureus* too is rather shorter in proportion. It appears to resemble *A. Hemachalanus* (Hodgson *nec* Anderson) but to be larger and different in colour. The skull shews distinctions from all these forms.

16. ARVICOLA BLYTHI.

Phaiomys leucurus, Blyth, J. A. S. B. 1863, XXXII, p. 89 (*nec Arvicola leucurus*, Gerbe).

Arvicola fuscescenti-fulvus subtus isabellinus, caudā fulvā, quartam partem totius longitudinis subæquante vel excedente, auribus rotundatis medioeribus, sparsim pilosis, palmis pentadactylis, ungue pollicari parvo obtuso, dentibus molaris similibus iis A. mandarini, molario ultimo maxillari postice magis producto, angulo interno postico ejusdem acutiore, dente anteriore mandibulari antice angulo fortiore interno munito. Long. sine caudā 4—4·5, caudæ 1·25—1·35, cranii 1, auris 0·4, plantæ 0·8 poll.

Hab.—Ladák.

The genus *Phaiomys* of Blyth cannot, I think, be separated from *Arvicola*, as the only character of any importance, the presence of a claw on the rudimentary thumb of the forefoot, is found in many *Arvicolæ*, the common water rat, *A. amphibius*, amongst others. The name *A. leucurus* is objectionable in the present case as the species has not a white tail, and the same specific term had been previously applied by Gerbe to a vole inhabiting the French Alps, but considered by Blasius identical with *A. nivalis*.

17. ARVICOLA STOLICZKANUS, sp. nov.

A. supra læte fusco-rufescens, sive sordide ferrugineus, subtus albus; vellere molli, longiusculo, ad basin schistaceo, palmis tetradactylis, plantis pentadactylis nudis brevibus, tarsis subtus pilis indutis, auriculis parvis e vellere haud emergentibus, rotundatis, caudā quintam partem totius longitudinis subæquante, pilis fulvescenti-albidis setosis instructā; dente molario maxillari ultimo angusto, intus angulis duobus fortioribus antice, nullis postice, extus quatuor parvulis, duobus antice, ceteris postice, spatio interveniente, munito. Long. a rostro ad basin caudæ (in corio dessiccato) 4, caudæ 1, tarsi 0·7 poll.

Hab.—Nubra valley, Ladák; Aktágh near Karakoram Pass.

In colour this species approaches *A. russatus* of Radde, but that is said to have the tail tawny above, and the teeth are described as very different. The last upper molar in *A. Stoliczkanus* is peculiarly formed, the anterior portion having two strong salient angles inside, and two very weak ones outside, this is followed by an elongate process with two slight angles outside and none inside, the whole tooth being much elongated.

18. NESOKIA INDICA.—Kashmir.

19. CRICETUS (CRICETULUS) PHÆUS, var.—Kuenluen range north of Sanju pass, Pámir, and Wakhán.

20. C. (CRICETULUS) FULVUS, sp. nov.

C. peraffinis Criceto phæo, sed major atque magis fulvus, arenaceo-fulvus vix cinereus. Long. corporis capitisque 4·5, caudæ 1·4, auris 0·75, tarsi 0·7 poll.

Hab.—Plains of Eastern Turkestan, Pámir, and Wakhán.

Another form of the *phæus* group of hamsters intermediate in size between *C. phæus* and *C. isabellinus*.

21. MUS CRASSIPES ?—Tankse, Ladák.

22. MUS PACHYCERCUS, sp. nov.

M. affinis *M. Bactriano*, sed minor, caudá brevior, crassiusculá, setosá, supra fusco-fulvus, subtus albidus, auribus ovalibus majusculis, pilosis, Long. (exempli in spiritu vini conservati) a rostro ad basin caudæ 2·3, caudæ 2, auris 0·5, plantæ 0·65 poll.

Hab.—Plains of Eastern Turkestan.

This is apparently the common house-mouse of Eastern Turkestan and differs from *M. Bactrianus* of Afghanistan, Persia, and North-western India, by having a shorter, thicker tail and a differently shaped and larger skull. The colour is sandy brown.

23. MUS SYLVATICUS, var.—Káshghar ; Panja in Wakhán.

24. GERBILLUS CRYPTORHINUS, sp. nov.

G. supra rufescenti-arenaceus, subtus albus, coloris dorsalis ventralisque limite bene notato ; rostro in lobum semicircularem intus pilis brevibus sparsis indutum, nares obtegentem, desinente ; caudá corporis capitisque longitudinem excedente, cum dorso superne fere concolore, sed magis rufescente, nisi apicem versus, ubi nigrescit, subtus pallidiore, pilis nonnullis ad apicem caudæ longioribus nigrescenti-fuscis, auribus mediocribus, ovalibus, extus antice dense pilosis, mystacibus confertis, capitem longitudine parum

excedentibus, supremis nigris, cæteris albis; vellere longiusculo, molli, nitido, basin versus ad tergum schistaceo; palmis subnudis, pilis sparsis indutis, plantis confertissime pilosis; dente molario ultimo simplici, incisoriibus unisulcatis. Long. exempli majoris nuper occisi a rostro ad basin caudæ 5·5, caudæ 6·25, auris 0·75, pedis posterioris a calcaneo 1·4 poll. Long. exempli minoris 4·5, caudæ 5 poll.

Hab.—Plains of Eastern Turkestan.

This form is distinguished from all others with which I am acquainted by the peculiar flap at the end of the snout covering the nasal apertures. This flap is semicircular in form, and hairy inside. I can find no description of a similar appendage in any other species, and there is nothing of the kind in *G. Indicus*, *G. Hurrianæ*, or in two undescribed species from Persia and Baluchistan, of all of which I have examined specimens preserved in spirits.

G. cryptorhinus is coloured like *G. meridjanus*, but is of the same size as *G. tamaricinus*. From both the above species and from their ally, *G. collium*,* which inhabits western Turkestan, the present species is distinguished by the tail being longer than the body.

Another peculiarity of *G. cryptorhinus* is that the lachrymal bone appears never to be ankylosed to the skull. Consequently the process of the lachrymal which in all true *Gerbilli* projects into the anterior angle of the bony orbit, is frequently absent from the whole bone being lost. This was the case in two skulls which I examined.

25. *DIPUS LAGOPUS*.—Plains of Eastern Turkestan.

26. *LEPUS PALLIPES* ?—Ladák.

27. *L. TIBETANUS* ?—Nubra valley, Ladák.

28. *L. YARKANDENSIS*.

Günther, Ann. and Mag. Nat. Hist., September, 1875, 4, XVI, p. 229.

L. parvus, affinis Lepori tolai, sed multo minor, nusquam niger nec griseus, auribus usque ad apicem concoloribus, haud nigris, arenaceo-isabellinus, fusco plusve minusve ad dorsum lavatus, lateribus lacteis, pectore pallidissime rufo, caudâ albâ, superne fuscâ; vellere molli, longiusculo, ad basin cinereo. Long. a rostro ad basin caudæ 17, capitis 3·6, caudæ 4, auris 4·25, tarsi 4·25 poll.

* For translations of the characters of this and of some other species described in Russian by Severtzoff in his *Turkestanische Jevotnie*, I am indebted to the kindness of Dr. Feistmantel. No translations are given in the "Zoological Record," and in the "Archiv für Naturgeschichte" even the names are omitted. It is greatly to be regretted that M. Severtzoff does not, like all the best naturalists amongst his countrymen, describe in a language more generally understood.

Hab.—Plains around Yárkand and Káshghar.

This species approaches *L. tolai*, Pallas, but is much smaller, with proportionally longer ears, and is chiefly remarkable for having no black on the tips of the ears, nor on the tail, and no grey tint on any part of the body.

29. *L. PAMIRENSIS*, Günther, l. c.

L. supra arenarius vel fusco-isabellinus, infra albus, uropygio albescenti-cinereo; caudá superne nigrá; aurium marginibus superioribus extus nigris; pectore pallido rufo; vellere denso, molli, ad basin, præter ventrali, cinereo; pilis longioribus ad dorsum nigro-terminatis, intermixtis. Long. a rostro ad basin caudæ circiter 18, caudæ 4, auris a basi anticá 5, ejusdem latitudo 2·75, cranii longitudo 3·5, tarsi 5 poll.

Hab.—Banks of Lake Sirikul, Pámir.

This is distinguished from the last by being somewhat larger, by having the ends of the ears and the upper part of the tail black, and by its grey rump. It is near to *L. Tibetanus* but differently coloured. The ears in the dry skin measure only 3·6 in. from the orifice and 4·5 from the head outside.

30. *L. STOLICZKANUS*, sp. nov.

L. præcedenti peraffinis, arenario-fulvus, differt tantum auribus multo longioribus, vellere dorsali nigro lavato. Long. corii desiccati a rostro ad basin caudæ 17·5, caudæ (vertebrarum) 3, ejusdem cum pilis apicalibus fere 5, cranii 3·5, auris extus 5·2, tarsi 4·9.

Hab.—Hilly country and Thian Shan mountains north-east of Káshghar.

This is rather darker than the preceding species and has much longer ears. When fresh the latter would probably measure over 6 inches. Both this and the last appear to have longer ears than *L. Lehmanni*, Severtzof, in which they are the same length as the head.

31. *LAGOMYS LADACENSIS*.

L. Curzonæ, Stol., J. A. S. B., 1865, XXXIV, Pt. 2, p. 108, nec Hodgson.

L. Ladacensis, Günther, Ann. and Mag. Nat. Hist., Sept., 1875, Vol. XVI, p. 231.

L. major, pallide cervinus, seu rufescenti-fulvus, dorso in æstate magis rufescente, auribus rotundatis, majusculis, extus ferrugineis, velleris dorsalis dimidio basali nigrescenti-plumbeo, apicali primum rufescente, tunc demum albescenti-isabellino, pilis nonnullis longioribus nigris ad dorsum intermixtis, ventre pedibusque pallide fulvis, capite antice rufescente, vibrissis supe-

rioribus nigris, inferioribus albis. Long. tota circa 9, cranii 2.25, auris 1, tarsi 1.5 poll.

Hab.—Ladák.

This is the common species of northern and north-eastern Ladák but not apparently of the mountains bordering the Kashmir valley. It is easily recognized by its peculiar pale fawn colour, more rufous in summer. It was first described some years ago by Dr. Stoliczka, who referred it to *L. Curzoniæ*. I had occasion subsequently to shew that the true *L. Curzoniæ* of Hodgson is a different species, and I have just heard from Dr. Günther, whilst this paper is passing through the press, that he has named the present form *Ladacensis*: I have consequently withdrawn the name I had proposed to give it. It is allied to *L. ogotona* by the form of the skull.

32. *L. AURITUS*, sp. nov.

L. superne sordide fulvus fusco-lavatus, capite humerisque rufescentibus, auribus magnis rotundatis, pilis isabellinis indutis, vellere molli, pilis basin versus nigrescenti-plumbeis, apices versus in dorso lateribusque isabellinis, fusco-terminatis, subtus albis. Long. (in corio desiccato) tota circiter 7.5, cranii 1.8, auris 1, tarsi 1.2 poll.

Hab.—Pangong lake, Ladák.

A larger form than *L. Roylei* with much larger ears. The colour in two skins from Lukung on the Pangong lake is smokey brown. The ears are as large as in the last species and must in the living animal be nearly $1\frac{1}{2}$ inches across.

33. *L. GRISEUS*, sp. nov.

L. sordide griseus, subtus albus, ad dorsum frontemque leviter rufescenti-lavatus, vellere elongato, molli, ad basin plumbeo-nigro, apices versus in dorso lateribusque griseo, apicibus ipsis nonnullis fuscis; auribus magnis rotundatis, pilis sparsis albidis indutis. Long. in exemplo nuper occiso 7, capitis 1.75, auris 1.4, tarsi 1.3 poll.

Hab.—Kuenluen range South of Sanju Pass.

I know of no other *Lagomys* which approaches this in colour. It is a peculiar grey, almost the colour of *Chinchilla*. The skulls of the last and present species approach in character to those of *L. Roylei* and *L. rufescens* but still exhibit well-marked differences.

34. *LAGOMYS MACROTIS*? Günther, l. c.—Kuenluen range?

The above is a wonderfully rich series of *Leporidae*.

UNGULATA.

35. *SUS SCROFA*, var. *NIGRIPES*.

Hab.—Thian Shan mountains near Káshghar.

The two specimens, male and female, closely resemble the European wild boar, but the legs are black, and there are some trifling cranial differences, which, although perhaps insufficient to justify specific distinction, are worthy of notice.

36. *OVIS HEINSI*?—Thian Shan mountains.37. *O. NAHURA*.—Kuenluen range.38. *CAPRA SIBIRICA*.—Kuenluen range and Thian Shan mountains.39. *GAZELLA SUBGUTTUROSA*, var. *YARKANDENSIS*.

G. subgutturosa cornibus lyriformibus justa caput subparallelis, lente divergentibus; facie fusco valde striatá.

Hab.—Plains of Eastern Turkestan.

This differs much from the typical form of *G. subgutturosa*, the horns taking a much less open curve, and the face markings being much darker, but as intermediate forms are found in Persia, I do not separate it.

40. *PANTHOLOPS HODGSONI*.—Ladák.

41. *CERVUS*, sp. (horns only)—? Thian Shan mountains N. E. of Káshghar.

42. *CAPRIOLUS PYGARGUS*? (horns only)—Káshghar?

P. S. *Sept. 28th.*—The number of the Annals and Magazine of Natural History for September, 1875, containing descriptions of several species of hares and *Lagomys* by Dr. Günther, was only received just before the last proof of this paper was passed. Although, under the rules usually adopted in England, the names given by myself would have priority, from having been given in a paper read before the Asiatic Society in August, I have thought it best to withdraw them, and to substitute those given by Dr. Günther, in order to obviate any risk of confusion in the nomenclature.
